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THE WONDERFUL DEVELOPMENT OF PHOTOGRAPHY

BY THOMAS PETER GARRETT

ONE hundred and ninety years ago, Mr. John Herman Schulze, a corpulent, jovial professor of languages, one afternoon quite by accident placed a bottle of silver salts in the rays of the sun coming through his study window. A few minutes later he observed that the contents of the bottle had turned almost black. He picked the bottle up carefully and examined it.

A white line, faint at each end but very light in the center ran across the bottle. This line was simply the undarkened contents of the bottle. This was queer. He lifted it closer to his spectacled eyes in order to learn the truth, when lo and behold the contents of the bottle shifted and the whole bottle became perfectly white. The line was gone.

He placed the bottle in the sun again through curiosity, and noticed a cord hanging from one side of the window and crossing between the bottle and the rays of the sun. When the bottle had turned dark again, he picked it up carefully, and there was the line as before. He shook the bottle. The line disappeared and the bottle was white again.

He pasted a strip of paper on the bottle and placed it again in the sun. When it turned dark again he set it upon his desk in the shade, gently removed the paper and there on the darkened contents of the bottle was printed in white a perfect facsimile of the piece of paper. Then he wrote on the bottle and the writing appeared in white. He realized he had made a great discovery. He displayed the mystery to his friends. His friends told others and John Schulze became known as a magician. But the chemists and experimenters of that generation began to analyze this magic and study into the relation of the sun's rays to quicksilver. When John Herman Schulze died in 1744 he left a writing in Latin explaining his method of making silver salts. This method was taken up immediately by the inventors, and seventy years later Thomas Wedgwood turned John Herman Schulze's discovery in the direction of picture making.

He made images of nature, but he was never able to fix them.

Long before Schulze's discovery the camera obscura was known and those who gazed upon the beautiful pictures produced by its agency often longed to find some method by which they might be fixed. This was perhaps one of the reasons why Wedgwood in working on the discovery, made by Schulze, tried to relate it to picture making.

The camera obscura was invented about the middle of the 16th Century, by Baptista Porta, an Italian philosopher, and consisted simply of a darkened room to which light was admitted by only a single small hole in the window-shutters. In such a room when the sun is shining brightly, a faint, unshaded image of exterior objects as the houses, trees, etc., upon which the window looks, is seen upon the surface of the wall or screen within the room which faces the window. Porta improved this primitive contrivance by placing a

double convex lens in the aperture of the shutters. Outside a mirror was placed to receive the rays of light and reflect them through the lens. The image upon the screen within was thus made brighter and more distinct, and was moreover shown in a natural or erect position.

Crowds flocked to Porta's house in Naples to see these pictures painted by light, glowing with color and depicted with marvelous accuracy. Soon further improvements were made and the camera obscura became the favorite adjunct to the country houses of the wealthy. Often taking the form of a small circular building erected if possible on a hill-top.

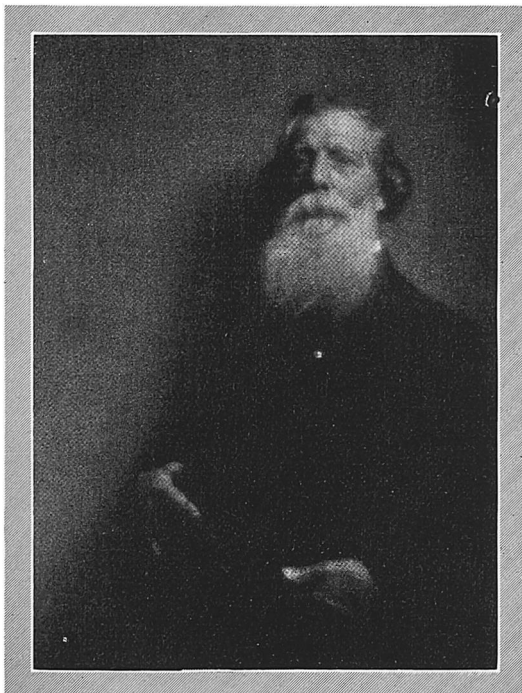
Now Joseph N. Niepce who is, among the majority, considered the discoverer of photography, was the first to make a permanent photograph. This was about 1815. Niepce was a timid person and a very patient photographer. Daguerre with whom Niepce entered a partnership in 1829, and signed an agreement that each was to know the other's secrets, was temperamentally opposite. He was bold, energetic, desirous of fame and its accompanying rewards, accustomed to success, and the applause of the public.

He was a stage scene painter. But the intoxication with the idea that it was possible to make a permanent print of the facsimile of nature led him to abandon his profession, and struggle to realize his idea. He succeeded after fourteen years of struggle during which time it was believed he was going insane.

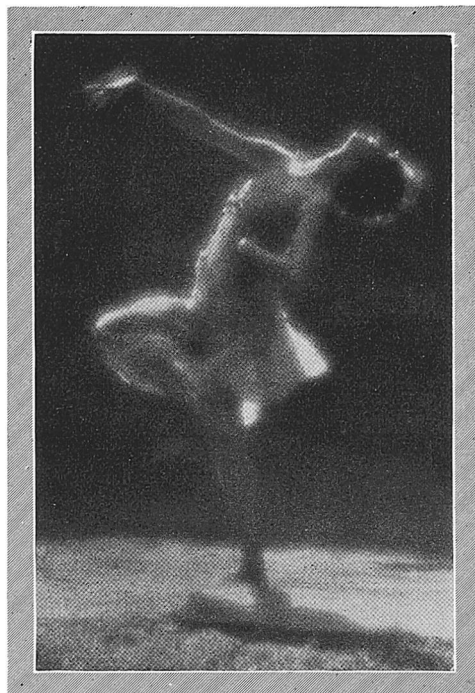
In 1839 Daguerre's method was printed and was read throughout the world. The photographs which were made by this method were called Daguerreotypes. In a short time Daguerreotype studios for the taking of photographs were set up everywhere and the whole world became introduced to photography.

Then in order to secure a portrait of one's self one had to submit to having one's face covered with powder and sit in the glaring sun for half an hour. To-day one can be ushered into a photographer's studio, climb into a luxurious throne, sit for perhaps a minute and depart over rugs of oriental splendor mid the fragrance of flowers wafted by electric fans without even having to remove one's hat.

Photography has developed marvelously since 1839. Photographs can now be taken instantaneously; photographs can be taken of flying bullets, and with the aid of an x-ray a photograph can be taken of the bones in animals and human beings; germs can be photographed with the aid of a microscope; photographs can be taken at night; photographs can be taken under water, and many successful color photographs have been taken. There is much talk lately in the world of photography about photographing the spirit of a subject. We can go now to a theatre and see moving pictures of real objects, actual photographs of life in action. All of this took root about 78 years ago. It is like a miracle.



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OF DETAIL



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STUDIO BY
NATURAL SUNLIGHT
FROM ABOVE



THE MYSTIC:—A STUDIO STUDY, TAKEN BY ARTIFICIAL LIGHT

Units of Beauty Taken Captive by the Camera

SUBJECTS DISCOVERED AND PHOTOGRAPHED BY HAROLD HARVEY, A YOUNG PHOTOGRAPHER OF BALTIMORE, MARYLAND



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A SIMPLE, SUBTLY CHARMING OUT-OF-DOORS STUDY. SHOWING AN UNUSUAL COMPOSITION.